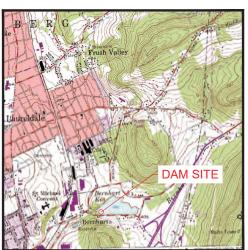
BERNHART DAM BREACH PLAN

MUHLENBERG TOWNSHIP, BERKS COUNTY, PENNSYLVANIA MARCH 2020 PADEP DAM ID: 06-001

PROPERTY OWNER/PROJECT SPONSOR: CITY OF READING 503 NORTH 6TH STREET READING, PA 19601

NOTES:

LIDAR TOPOGRAPHIC DATA OBTAINED FROM PENNSYLVANIA SPATIAL DATA ACCESS (PASDA) PANEL 39002480PAS_CONT.(HTTP://WWW.PASDA.PSU.EDU/) SUPPLEMENTED WITH AECOM FIELD TOPOGRAPHIC SURVEY PERFORMED ON JULY 25, 2017.





SHEET INDEX			
SHEET	DESCRIPTION	NO.	
CV	COVER SHEET	1	
EX	EX EXISITING SITE PLAN		
PR-1, PR-2	E&S PLAN / PROPOSED SITE PLAN	3,4	
PROF	LONGITUDINAL PROFILE	5	
XSEC	EXISTING AND PROPOSED CROSS SECTIONS	6	
DET-1, DET-2	DETAILS	7, 8	

CONTACTS:

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION SOUTH-CENTRAL REGIONAL OFFICE 909 ELMERTON AVENUE HARRISBURG, PA 17110

BERKS COUNTY CONSERVATION DISTRICT 1238 WELFARE ROAD, SUITE 200 LEESPORT. PA 19533

NOT ALL UTILITIES ARE SHOWN



THE LOCATION OF ALL UTILITIES (ABOVE OR BELOW GROUND) SHOWN ON THESE DRAWINGS ARE APPROXIMATE & WERE OBTAINED FROM USES TOPO MAPS ANDIOR UTILITY OWNERS. AECOM DOES NOT GUARANTEE THAT LOCATION SHOWN ON THE DRAWINGS ARE CORRECT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE LOCATIONS OF EXISTING UTILITIES (ABOVE OR BELOW GROUND), & TO NOTIFY THE CRESPECTIVE UTILITY OWNERS BEFORE BESIDNING CONSTRUCTION

CALL BEFORE YOU DIG PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL PENNSYLVANIA ONE CALL SYSTEM INC. 1-800-224-1776

DESIGN ONE CALL SERIAL NO.: 20173381994

LIST OF UTILITIES

AIR LIQUIDE INDUSTRIAL
MUHLENBURG TOWNSHIP
COMCAST CABLE COMMUNICATIONS INC
METROPOLITAN EDISON CO/FIRST ENERGY
CITY OF READING
READING AREA WATER AUTHORITY
UGI READING

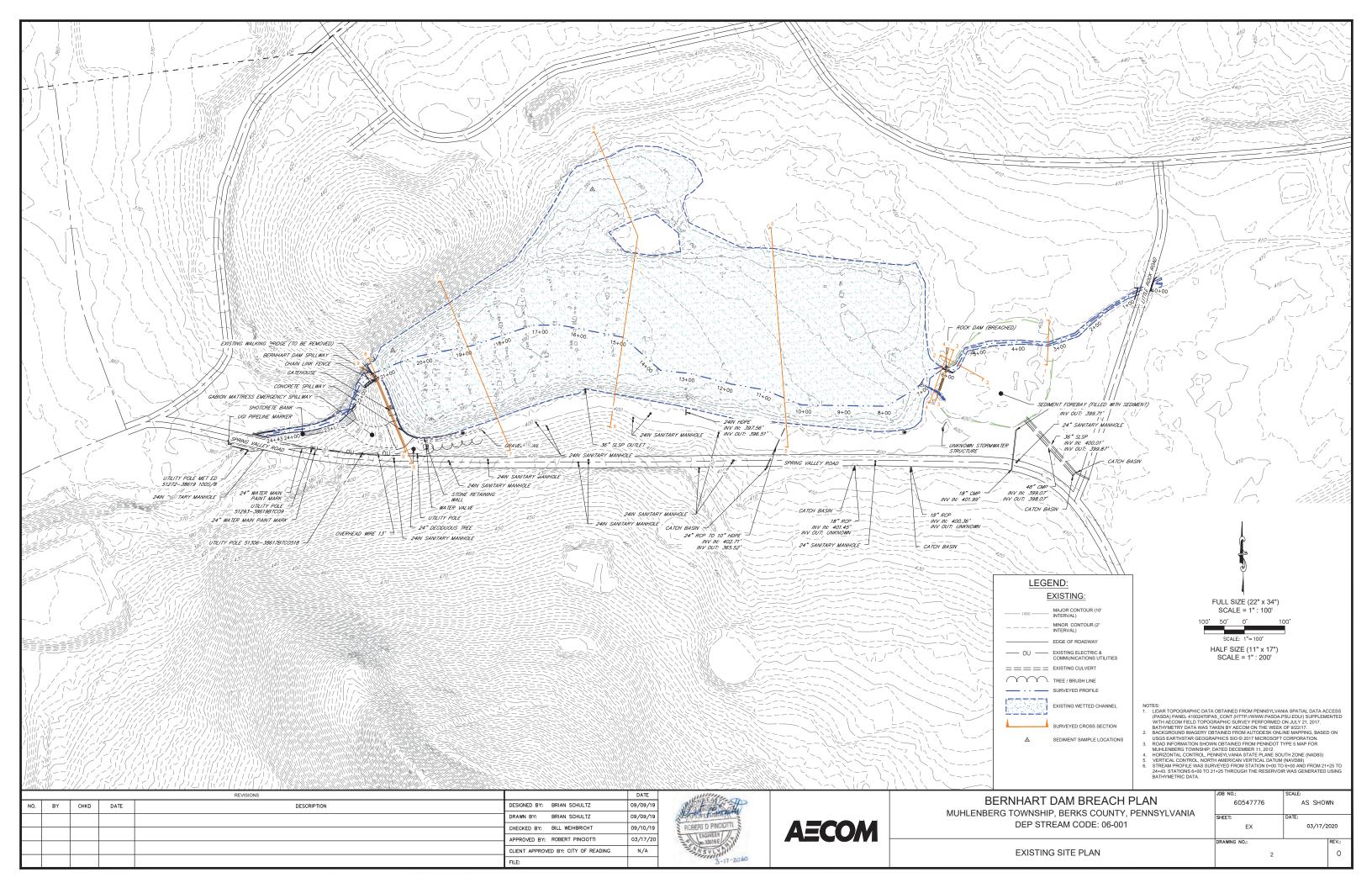
VERIZON WIRELESS LAURELDALE BOROUGH

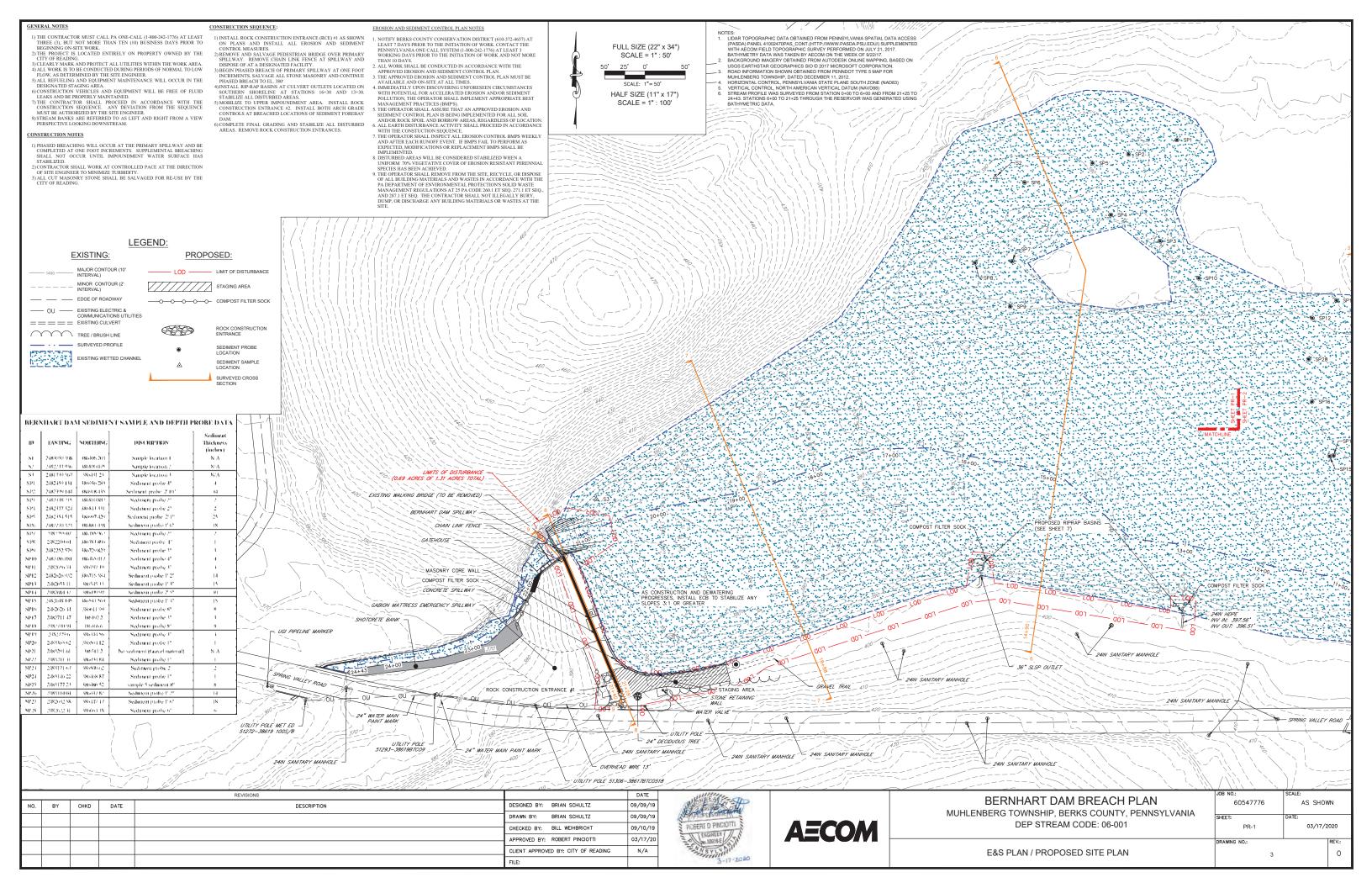
	REVISIONS				DATE	
NO.	BY	CHKD	DATE	DESCRIPTION	DESIGNED BY: BRIAN SCHULTZ	09/09/19
					DRAWN BY: BRIAN SCHULTZ	09/09/19
					CHECKED BY: BILL WEIHBRICHT	09/10/19
					APPROVED BY: ROBERT PINCIOTTI	03/17/20
					CLIENT APPROVED BY: CITY OF READING	N/A
					FILE:	

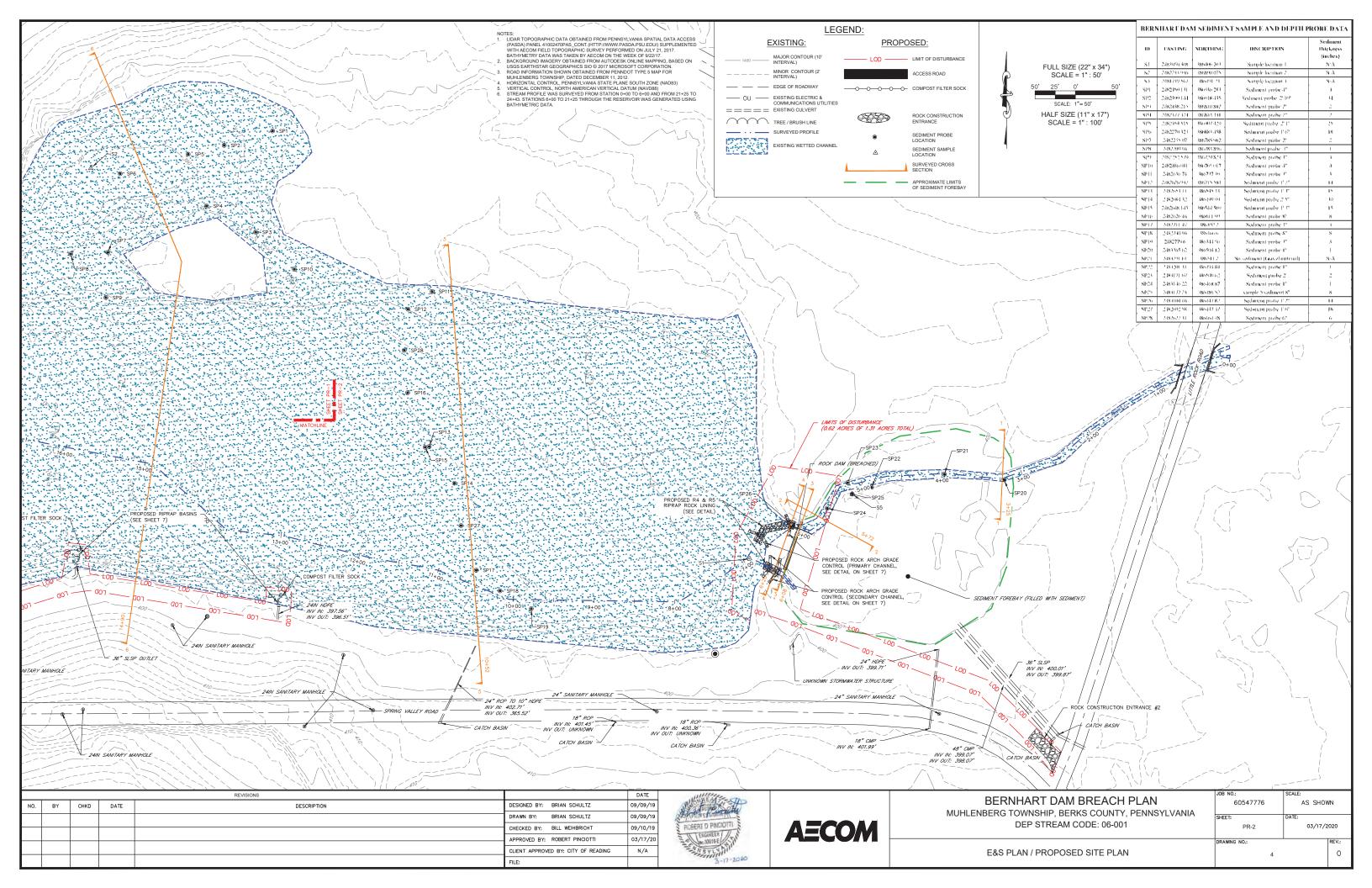


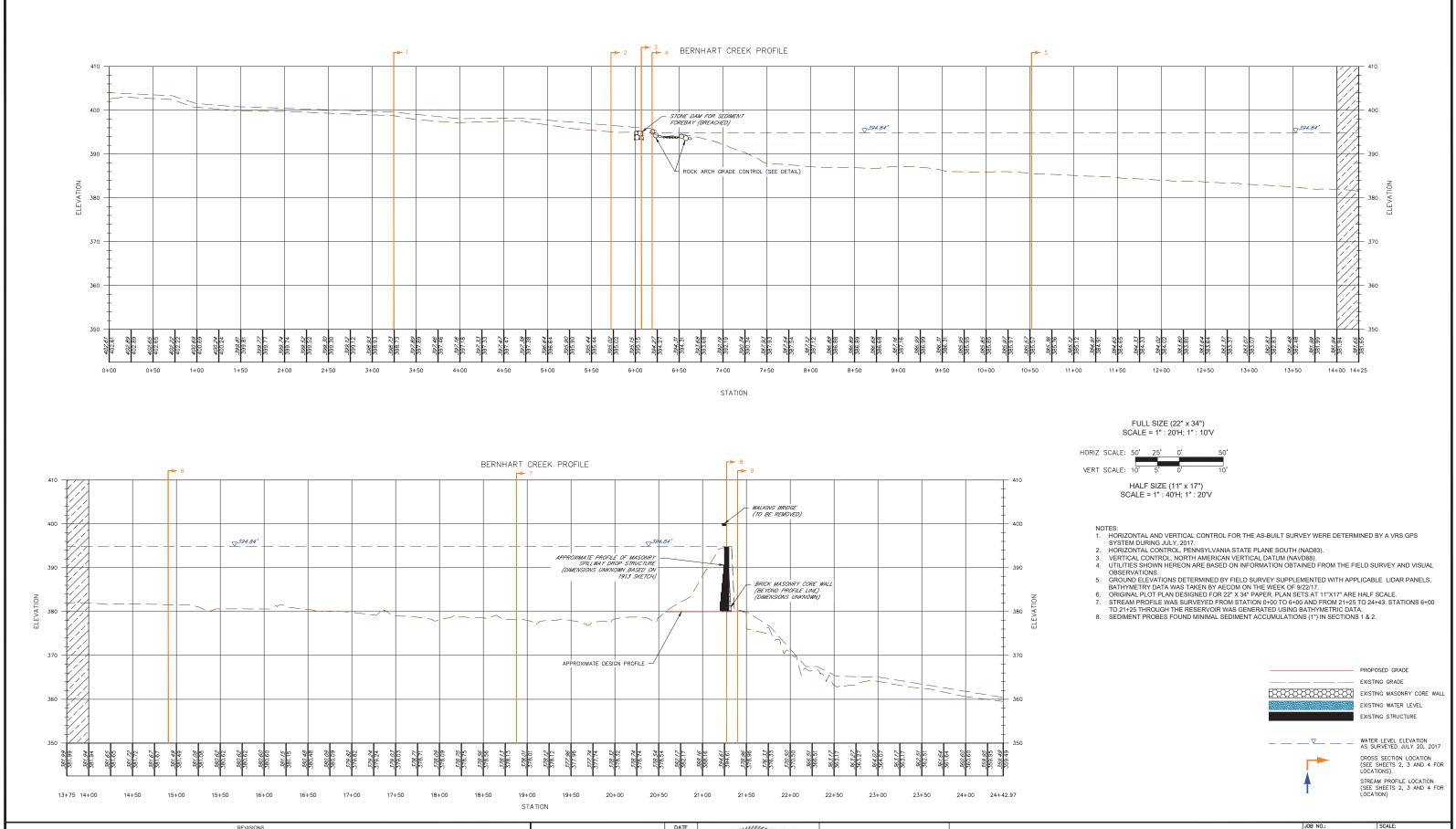


BERNHART DAM BREACH PLAN IUHLENBERG TOWNSHIP, BERKS COUNTY, PENNSYLVANIA DEP STREAM CODE: 06-001	JOB NO.: 60547776 SHEET: CV	AS SHOW DATE: 03/17/2	_
COVER SHEET	DRAWING NO.:		F

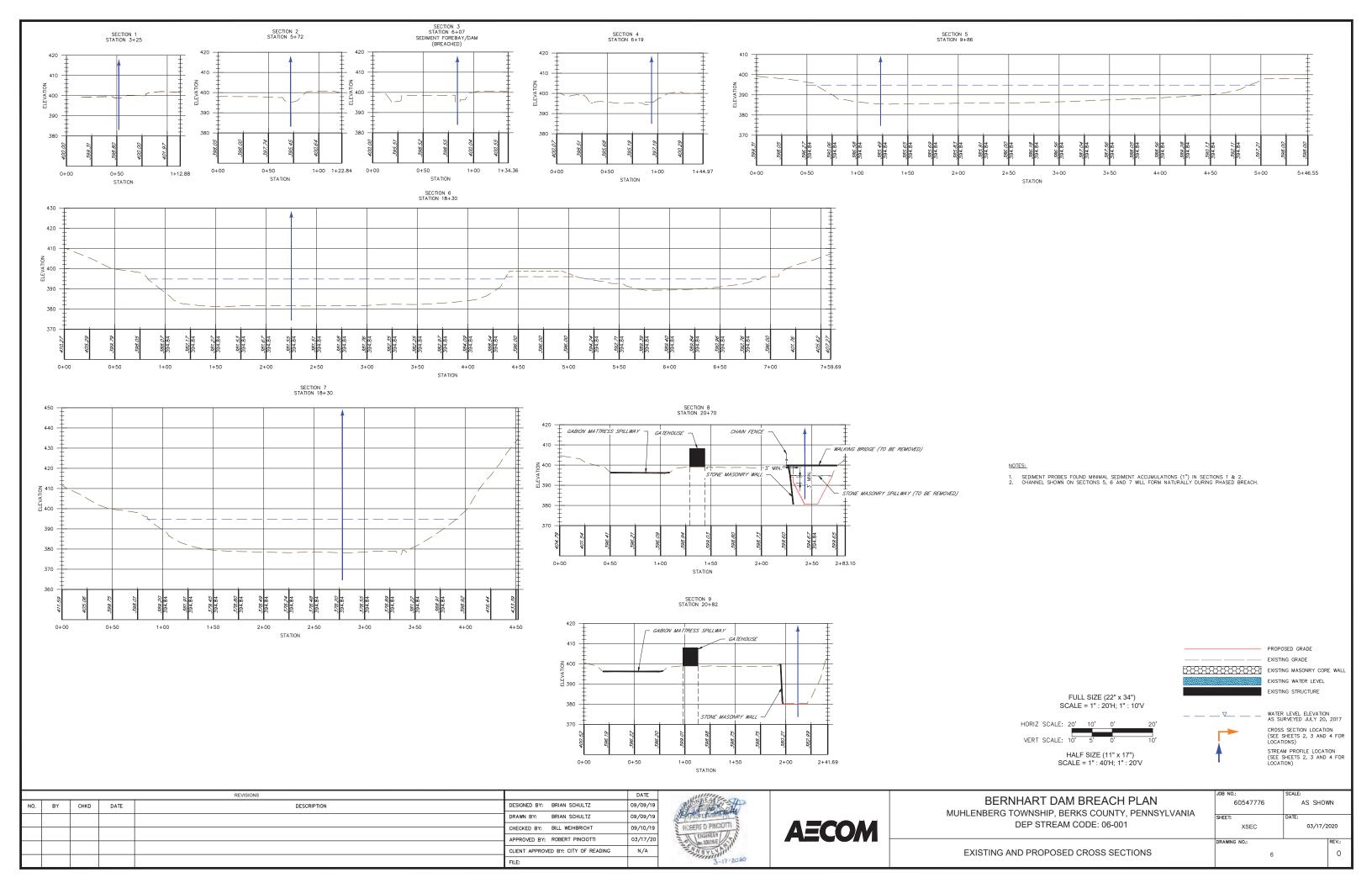


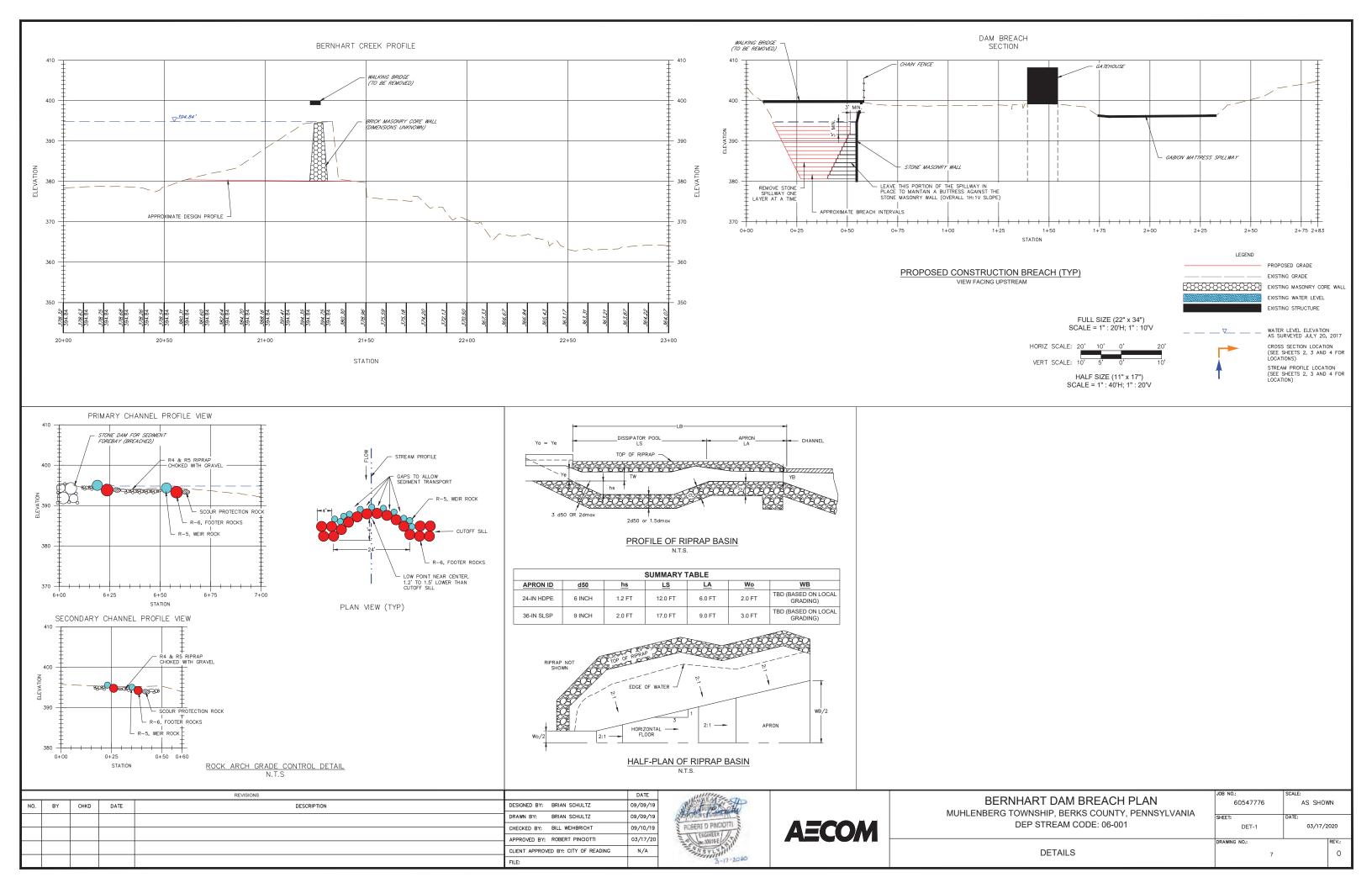






	REVISIONS		DATE	WHITE AREA TO		BERNHART DAM BREACH PLAN	JOB NO.:	SCALE:	
	10. BY	CHKD	D DATE DESCRIPTION	DESIGNED BY: BRIAN SCHULTZ 09/09/19	No transfer of			60547776	AS SHOWN
				DRAWN BY: BRIAN SCHULTZ 09/09/19	PROFE STORM		MUHLENBERG TOWNSHIP, BERKS COUNTY, PENNSYLVANIA	SHEET:	DATE:
┢				CHECKED BY: BILL WEIHBRICHT 09/10/19	ROBERT D PINCIOTTI	AECOM	DEP STREAM CODE: 06-001	PROF	03/17/2020
H				APPROVED BY: ROBERT PINCIOTTI 03/17/20	ENGINEER NO. 33916E			DRAWING NO.:	REV.:
L				CLIENT APPROVED BY: CITY OF READING N/A	WAS Y LY MIT		LONGITUDINAL PROFILE	5	0
				FILE:	3-17-2020				
	· · · · · ·		·	· · · · · · · · · · · · · · · · · · ·					-





Aashto #1 Rock Section A-A

- INSTALLATION: 1. STONE SIZE AASHTO #1 ROCK. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD

- APPLY)
 THICKNESS NOT LESS THAN EIGHT (8) INCHES.
 WIDTH TWENTY (20) FOOT MIN., BUT NOT LESS THAN THE FULL WIDTH AT
 POINTS WHERE INGRESS OR EGRESS OCCURS.
 FILTER CLOTH WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO
 PLACING OF STONE, IF SOIL IS SOGGY. FILTER CLOTH WILL NOT BE
 REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
 SURFACE WATER ALL SURFACE WATER FLOWING OR DIVERTED TOWARD
 CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE IF
 PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE
 PERMITTED.

FLOW

AREA

MAINTENANCE:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. THE SPECIFIED STONE THICKNESS SHALL BE OSELVATION SEQUIMENT THE SPECIFIED STONE THANKINGS SPARL BE CONSTANTLY MAINTAINED BY ADDING ROCK. A STOCK PILE OF STONE SHALL BE MAINTAINED ON THE SITE FOR THIS PURPOSE. ALL SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE

SPILLED, DROPPED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED AND PLACED ON A TOPSOIL STOCKPILE AT THE END OF EACH WORKING DAY. WASHING OF PAVEMENT IS NOT PERMITTED UNLESS RUNOFF GOES TO A SEDIMENT TRAPPING MEASURE.

WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO EXITING CONSTRUCTION SITE. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH PRECIPITATION EVENT.

UNDISTURBED

ROCK CONSTRUCTION ENTRANCE

N.T.S.

SECTION VIEW

DISTURBED

AREA

UNDISTURBED

PLAN VIEW

- COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT A LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (SEE ABOVE).
- 2. CONSTRUCTION TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
- 3. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES ½ THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED OF IN THE DESIGNATED FILL AREA.
- 4. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
- DIJUJEGNADABLE FILTER SOCK SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. BIODEGRADABLE
- 6. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE OPON STABILIZATION OF THE AREA INIDITARY TO THE SOCK, STARES SPALL BE REMOVED, THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

COMPOST FILTER SOCK DETAIL NTS

NOTES: T. PLACE EROSION CONTROL BLANKET ON SLOPES AT OR STEEPER THAN 3:1 OR AS SHOWN ON THE PLANS. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED, EROSION BLANKET MATERIAL TO BE USED IN TEMPORARY BYPASS CHANNEL IS TO MEET EAST COAST EROSION BLANKET. COMPANY ECS-2 OR EQUIVALENT MATERIAL, CONSTRUCTION, AND SPECIFICATIONS.

- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15CM) DEEP X 6" (15CM) WIDE TRENCH WITH APPROXIMATELY 12" (30CM) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET EXTENTH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO
- TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12' (30CM) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30CM) APART ACROSS THE WIDTH OF THE BLANKET.

 ROLL THE BLANKETS (A.) DOWN THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES ...IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PAITTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PAITTERN, THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5CM-12.5CM) OVERLAP DEPRODING TO THE TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING ... INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
- INSTALLED BLANKET.
 CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30CM) APART ACROSS ENTIRE

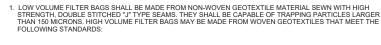
SUPPLEMENTAL NOTES: *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6"

(150M) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

"STAPLE PATTERNS AND APPLICATIONS VARY BETWEEN MANUFACTURERS AND AMATTING TYPES. THE CONTRACTOR IS ENCOURAGED TO CONSULT SPECIFIC MANUFACTURER INSTALLATION PROCEDURES FOR STAPLE SPACING AND CONSTRUCTION.

EROSION CONTROL BLANKET

N.T.S.



ELEVATION VIEW

FILTER BAG

IEIE

VEGETATED

FILTER

GRASSY AREA

FLOW

WELL VEGETATED

GRASSY AREA

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 lb/in
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 lb
MULLEN BURST	ASTM D-3786	350 psi
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

WELL VEGETATED

GRASSY AREA

PLAN VIEW

HEAVY DUTY LIFTING STRAPS

ASHTO NO. 57 COARSI

SEWN IN SPOUT

- DISCHARGE HOSE

HOSE TO BE INSERTED

AS SPECIFIED BY MANUFACTURER AND SECURELY FASTENED WITH

METAL CLAMPS

CLAMPS

ONLY WHEN LEVELING

- 2. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME ½ FULL. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. IT IS RECOMMENDED THAT BAGS BE PLACED ON STRAPS TO FACILITATE REMOVAL.
- 3 BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA AND DISCHARGE ONTO STABLE EROSION BAGS SHALL BE LOCATED IN WELL-YEER TATED (GRAST) AREA, AND DISSTANCE UNTO STABLE, EXOSION RESISTANT AREAS. WHERE IT IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES REGREATER THAN 5%. FOR SLOPES EXCEEDING 5%. CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.
- 4. NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHOULD BE INSTALLED BELOW BAGS LOCATED WITHIN 50 FEET OF RECEIVING STREAM OR WHERE GRASSY AREA IS NOT AVAILABLE. A COMPOST BERM OR COMPOST FILTER SOCK SHALL BE PLACED BELOW ANY BAG DISCHARGING TO A SPECIAL PROTECTION SURFACE WATER.
- 5. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.
- 6. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR ½ THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHOULD BE FLOATING AND SCREENED.
- 7. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED

PUMPED WATER FILTER BAG DETAIL

GENERAL CONSTRUCTION NOTES:

- PRIOR TO START OF RESTORATION WORK, INSTALL ALL IDENTIFIED PERIMETER E&S CONTROLS IN ACCORDANCE WITH THE STANDARDS IDENTIFIED IN THE 2012 PENNSYLVANIA EROSION AND SEDIMENT CONTROL MANUAL.
- MAINTAIN INSTALLED PERIMETER E&S CONTROLS IN ACCORDANCE WITH THE REQUIREMENTS IDENTIFIED IN THE 2012 PENNSYLVANIA EROSION AND SEDIMENT CONTROL MANUAL
- PENNOS L'AVINI A MINIMUM DEPTH OF 6 INCHES ACROSS ALL DISTURBED AREAS TO BE SEEDED. ADD FERTILIZER/SOIL AMENDMENTS AND SEED ALL DISTURBED AREAS. REFER TO TABLE 1.
- FERTILIZATION/SOIL SUPPLEMENT RATES SHALL MATCH THE RATES IDENTIFIED IN TABLE 1 UNLESS SOIL SAMPLES ARE
- ANALYZED FOR THE ACTUAL REQUIRED RATES.

 APPLY FERTILIZERS AND SOIL SUPPLEMENTS IN ACCORDANCE WITH THE 2012 PENNSYLVANIA EROSION AND SEDIMENT CONTROL MANUAL
- SEED THE DISTURBED AREAS USING THE SEED MIXTURE IDENTIFIED IN TABLE 2 LINESS SPECIFIED BY THE OWNER
- APPLY SEED MIXTURES IN ACCORDANCE WITH THE 2012 PENNSYLVANIA EROSION AND SEDIMENT CONTROL MANUAL.

 UPON STABILIZATION OF ALL DISTURBED AREAS (70% VEGETATION), REMOVE PERIMETER & CONTROLS.
- HYDROSEED WITH OWNERS WRITTEN APPROVAL. THIS INCLUDES SUPPLEMENTAL APPLICATIONS AND MUST BE PART OF
- CONTRACTORS PROPOSAL.

 10. ALL TOPSOIL AREAS LESS THAN 3:1 SLOPE MUST BE CULTIMULCHED WITH OWNERS APPROVED EQUIPMENT TO BE
- DRAGGED BEHIND WHEELED FOUIPMENT.
- DRAGGED BEHIND WHEELE BUILDINGHEN.
 ALL TOPSOILED AREAS GREATER THEN 3:1 SLOPES MUST BE TRACKED WITH TRACKED EQUIPMENT AND HYDROSEEDED WITH FLEXTERRA OR APPROVED EQUAL OR MUST USE EROSION CONTROL MATTING.
- 12. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 72 HOURS OF COMPLETION.

TARIF 1 PERMANENT SOIL SUPPLEMENTS RATES AGRICULTURAL LIM 10-20-20 FERTILIZEF 10 LBS/ACRI SUPPLEMENT TONS/ACE

TABLE 2B			
FLAT AREA SEED MIX FOR DE-COMPACTED PAD AREA			
SEED	RATES		
BIRDSFOOT TREFOIL	10 LBS/ACRE		
TALL FESCUE	35 LBS/ACRE		

TABLE 2A			
HAY FIELD SEED MIX FOR DISTURBED AREAS BEYON DE-COMPACTED PAD			
SEED	RATES		
ALFALFA	7 LBS/ACRE		
ТІМОТНУ	4 LBS/ACRE		
WHITE CLOVER	3 LBS/ACRE		

2 LBS/ACRE

	.	
ND	SEASON	
	FALL	
	SPRING	

TABLE 2C NURSE CROPS CROP 30 LBS/ACRE (WHEAT) 30 LBS/ACRE (OATS)

STABILIZATION DURING NON-GROWING SEASONS:

BIRDSFOOT TREFOIL

ALL CONSTRUCTION SHOULD BE PLANNED FOR COMPLETION WITHIN THE RECOMMENDED DATES FOR THE APPLICATION OF PERMANENT SEEDING AND ESTABLISHMENT OF A PERMANENT VEGETATIVE COVER, HOWEVER, WHEN CONSTRUCTION MUST BE DONE AND IS COMPLETED DURING A NON-GROWING SEASON (WINTER TIME, ETC.), TEMPORARY STABILIZATION BMPs MUST BE IMPLEMENTED AND ADEQUATELY MAINTAINED. THE APPLICATION OF STRAW MULCH AT THE RATE OF THREE (3) TONS PER ACRE IS RECOMMENDED. THE BMPs SHOULD BE CHECKED WEEKLY (UNLESS SNOW COVERED) TO IDENTIFY AREAS THAT BECOME BARE. THESE BARE AREAS SHOULD BE COVERED WITH A PROPERLY INSTALLED EROSION CONTROL MATTING OR MULCH

ALL TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROLS MUST BE MAINTAINED UNTIL 70% PERENNIAL VEGETATIVE COVER IS ACHIEVED.

REVISIONS DATE CHKD DATE DESCRIPTION 09/09/19 BY BRIAN SCHULTZ 09/09/19 CHECKED BY: BILL WEIHBRICHT 09/10/19 APPROVED BY: ROBERT PINCIOTTI 03/17/20 CLIENT APPROVED BY: CITY OF READING N/A





BERNHART DAM BREACH PLAN MUHLENBERG TOWNSHIP, BERKS COUNTY, PENNSYLVANIA DEP STREAM CODE: 06-001	JOB NO.: 60547776 SHEET: DET-2	AS SHOW DATE: 03/17/2	
DETAILS	DRAWING NO.:		REV.: